

# PHD DEFENCE

ANNE SOFIE LANSØ

TUESDAY 20 SEPTEMBER 2016 AT 13:00

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## ATMOSPHERIC CO<sub>2</sub> ACROSS DENMARK – THE IMPACT OF CO<sub>2</sub> SURFACE FLUXES

During her studies, Anne Sofie Lansø has investigated atmospheric CO<sub>2</sub> concentrations across Denmark.

Atmospheric CO<sub>2</sub> is the main driver of the current climate changes, and in order for us to predict the coming changes and challenges we are facing, we need to study the past and the present states of the climate system.

A three dimensional modelling system for Denmark has been developed by Anne Sofie Lansø to study the current Danish surface fluxes of CO<sub>2</sub> and the impact on atmospheric CO<sub>2</sub> concentrations. The modelling system had a high resolution in both time and space.

The new research findings contribute to the understanding of the importance of resolving surface exchanges of CO<sub>2</sub> at a high resolution in both space and time for modelling studies. Furthermore, this modelling system has been used to for the first time to estimate an annual CO<sub>2</sub> budget for Denmark, which includes all sources and sinks.

The PhD degree was completed at the Department of Environmental Science, Science and Technology, Aarhus University.

This résumé was prepared by the PhD student.

**Time: Tuesday 20 September 2016 at 13.00**

**Place:** Room K1.36, Department of Environmental Science, Frederiksborgvej 399, Aarhus University Roskilde Campus, 4000 Roskilde.

**Title of dissertation:** *Mesoscale modelling of atmospheric CO<sub>2</sub> across Denmark*

**Contact information:** Anne Sofie Lansø, e-mail: [asla@envs.au.dk], +4587158519, +4520164713

**Members of the assessment committee:**

Senior research scientist and Head of the Carbon Cycle modelling group, Tuula Aalto, Finnish Meteorological Institute, Helsinki, Finland

Researcher, Ute Karstens, Department of Physical Geography and Ecosystems Science, Lund University, Sweden

Professor, Henrik Skov (chair), Department of Environmental science, Aarhus University

**Main supervisor:**

Senior scientist Camilla Geels, Department of Environmental Science, Aarhus University

**Co-supervisor:**

Senior scientist Lise-Lotte Sørensen, Arctic Research Center, Department of Bioscience, Aarhus University

**Language:** The PhD dissertation will be defended in English